

NOTES ON YELLOWJACKETS AS A FOOD SOURCE
FOR THE BALD FACED HORNET,
VESPULA MACULATA (L.)¹

James O. Howell²

There have been few reports in the literature concerning the predatory habits of the bald faced hornet on other species of the genus *Vespula*. Rau (1930) recorded "*Vespula germanica*" [= *V. maculifrons* (Buysson)] as being attacked and killed by the bald-faced hornet, and Bromley (1931) reported the same thing. Davis (1928) saw an individual hornet catch several specimens of *V. carolina* [= *V. squamosa* (Drury)] and then let them go.



Figure 1. Bald faced hornet worker with captured yellowjacket, *V. maculifrons*.

¹Accepted for publication: November 19, 1972.

²Department of Entomology, University of Georgia, College of Agriculture Experiment Stations, Georgia Station, Experiment, Georgia.

From observations made in 1971 and 1972, the author feels that the extent of this predatory habit on *V. maculifrons* is far greater than was originally believed, and that this species is an important food source for the bald faced hornet in areas where their populations overlap. In August of 1971 while observing the feeding of yellowjackets on grapes in a vineyard, a hornet was seen to fly in and pick a worker of *Vespula maculifrons* from the grapes (Fig. 1). It crushed the insect's prothorax with its mandibles, proceeded to tear off the wings and head, then flew away with the remainder. During the next 15 minutes 3 other hornets were observed to do the same thing. Though numerous muscoid flies were present around the fermenting grapes, none was seen being attacked by the hornets. On August 21, 1972 the same behavior was noted in a cowpea field, where the yellowjackets were collecting nectar.

When a hornet and an individual of *V. maculifrons* were captured in an insect net, the hornet would immediately attack the yellowjacket as soon as they came in close proximity. Hanging from the strands of the net by a hind leg, it would then tear it apart as described before. When placed in the net with *V. squamosa*, the hornet would attack the yellowjacket but immediately let it go. These trials were repeated 10 times with both species, each trial lasting 5 minutes. Nine specimens of *V. maculifrons* were captured and torn apart by the hornets, while none of the *V. squamosa* individuals was harmed. I have never seen an individual of *V. squamosa* to be killed by a hornet in the field.

LITERATURE CITED

- Bromley, S. W. 1931. Hornet Habits. J. New York Entomol. Soc. 39 (2):123-129.
Davis, W. T. 1928. Notes on Collecting in Virginia. J. New York Entomol. Soc. 36:197.
Rau, P. 1930. Behavior Notes on the Yellow Jacket *Vespula germanica* (Hymen: Vespidae). Entomol. News. 41:185-190.

ABSTRACT.—The yellowjacket *Vespula maculifrons* is apparently an important food source for the bald faced hornet, *V. maculata*, in areas where their populations overlap. Hornet workers were observed to readily attack this species in the field. The hornets also would attack individuals of a closely related yellowjacket species, *V. squamosa*, but would always let them go.—James O. Howell, University of Georgia, College of Agriculture Experiment Stations, Georgia Station, Experiment, Georgia. 30212.

Descriptors: Vespidae; *Vespula*; bald faced hornet, food source; yellowjackets, as prey.